

Current Conditions Report #20140815

August 15, 2014

Summary: Based on climate predictions and field observations, the threat for mass coral bleaching in southeast Florida, between Miami-Dade and Martin counties remains **MODERATE**.

Environmental Monitoring

The latest CRW experimental 5 kilometer (km) Daily Coral Bleaching Alert Area (Figure 1) indicates that southeast Florida is presently experiencing a moderate level of thermal stress, with a bleaching warning present throughout the region. Coral bleaching alerts are possible in southeast Florida if current conditions continue or worsen.

- ❁ NOAA's Bleaching Hotspot Map compares current SST to the maximum monthly mean, which is the average temperature during the warmest month of the year. Corals start to become stressed when SST is 1°C greater than the highest monthly average. Currently SST is elevated, and has surpassed the 1°C Hotspot bleaching threshold in the majority of southeast Florida (Figure 2).
- ❁ Coral bleaching risk increases if the temperature stays elevated for an extended period of time. NOAA's experimental 5km Degree Heating Weeks (DHW) map shows the accumulation of temperature stress over the previous 12 weeks, with 1 DHW equal to one week at 1°C greater than the maximum monthly mean. The most recent DHW map (Figure 3) indicates that there is a slight accumulation of temperature stress of 1 -2 DHW offshore of the majority of southeast Florida.
- ❁ Near real-time data from CRW's Satellite Virtual Stations indicate that SST at Broward, Palm Beach and Martin reef sites is currently above the maximum monthly mean and has surpassed the bleaching threshold, thus triggering a 'Bleaching Warning' at those locations (Figure 4).

The Florida Department of Environmental Protection's Coral Reef Conservation Program staff will continue to monitor NOAA's Hotspot, DHW and Alert Area maps, as well as Virtual Station data for the remainder of the summer bleaching season.

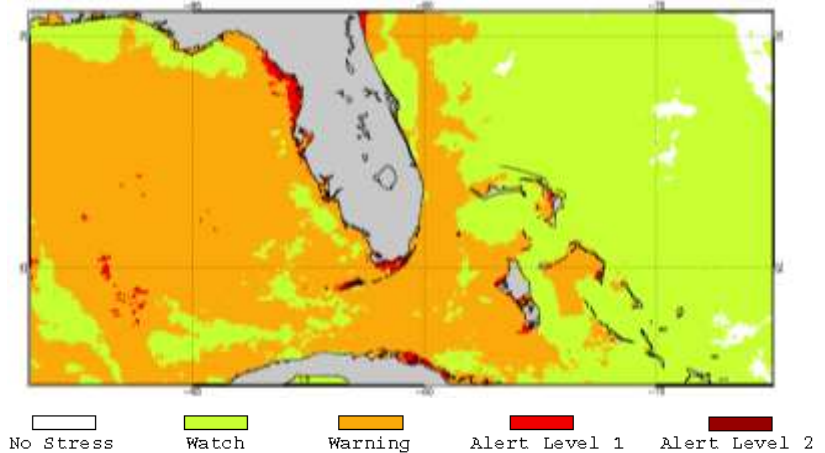


Figure 1. NOAA CRW Experimental Daily 5 km Blended Geo-Polar Nighttime Blended Bleaching Alert Area; August 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

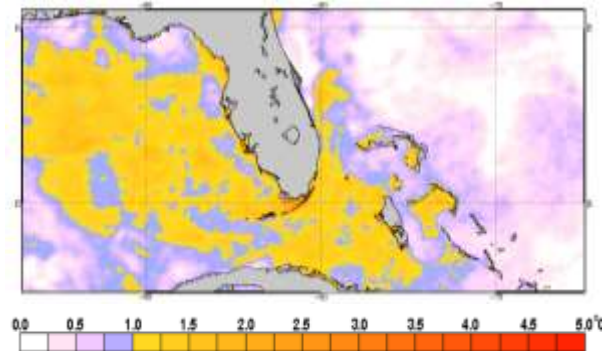


Figure 2. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime Hotspot; August 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

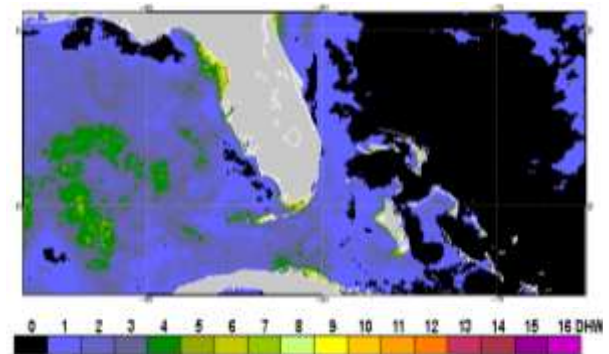


Figure 3. NOAA CRW Experimental Daily 5km Blended Geo-Polar Nighttime DHW; August 12, 2014
<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php>

Observer Network

A total of five BleachWatch Observer Network reports were received during the first two weeks of August, all from Miami-Dade County. All five reports indicated observations of paling, although a few isolated colonies were fully bleached. The overall percentage of corals exhibiting signs of thermal stress was 11 – 30%, although one site reported that 31 – 50% of corals were paling. Affected corals included Brain coral, (*Meandrina meandrites*, *Pseudodiploria clivosa*, *Pseudodiploria strigosa* and *Diploria labyrinthiformis*), Encrusting/Mound/Boulder corals (*Siderastrea siderea*, *Orbicella faveolata*, *Dichocoenia stokesi*, and *Stephanocoenia intersepta*) and Branching corals (*Acropora palmata* and *Porites astreoides*). Other observations included paling of *Palythoa spp.*, fire coral, and gorgonians. Additionally, several reports indicated signs of white band and black band disease. In all reports the water temperature ranged from 85°F - 87°F; weather conditions were also reported as calm, with winds less than 10 knots and generally low cloud cover.

These isolated observations do not necessarily indicate the onset of a mass bleaching event at this time, however more field observations from southeast Florida’s reefs are needed. Although the latest Coral Bleaching Thermal Stress Outlook (Figure 5) does not indicate that the region is likely to experience a continued increase in thermal stress level, if current weather conditions persist, including low winds, calm waves, and sunny skies, more widespread bleaching may be observed in southeast Florida.

The BleachWatch Observer Network is encouraged to submit observations on coral condition after every visit to the reef for the remainder of the summer season. **Remember, reports of ‘No Bleaching’ are just as important as bleaching reports!** To submit a report on coral condition in southeast Florida, or for more information on the SEAFAN BleachWatch Program, please visit www.SEAFAN.net and click “BleachWatch.”

For more information about SEAFAN BleachWatch or to organize a training session for your group to become a part of the Observer Network, please contact the Program Coordinator below.

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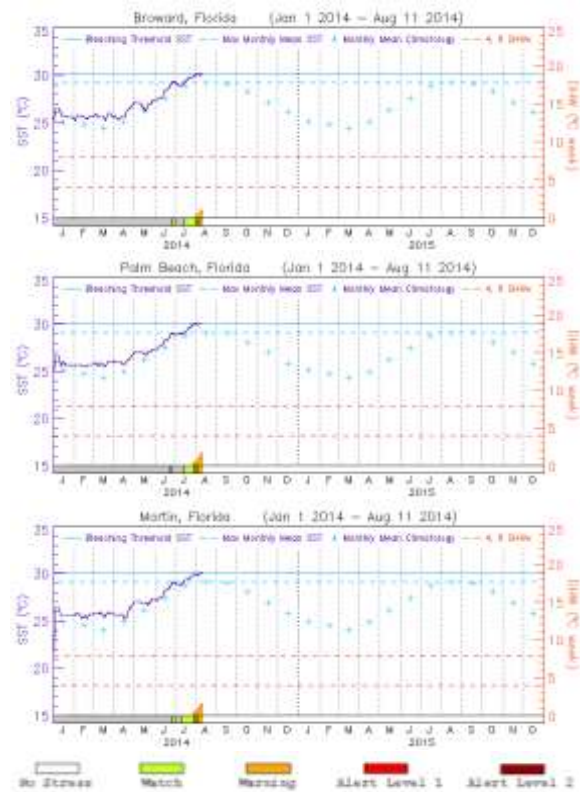


Figure 4. NOAA CRW Virtual Station Data; January 1, 2014 – August 11, 2014.
<http://coralreefwatch.noaa.gov/satellite/vs.php>

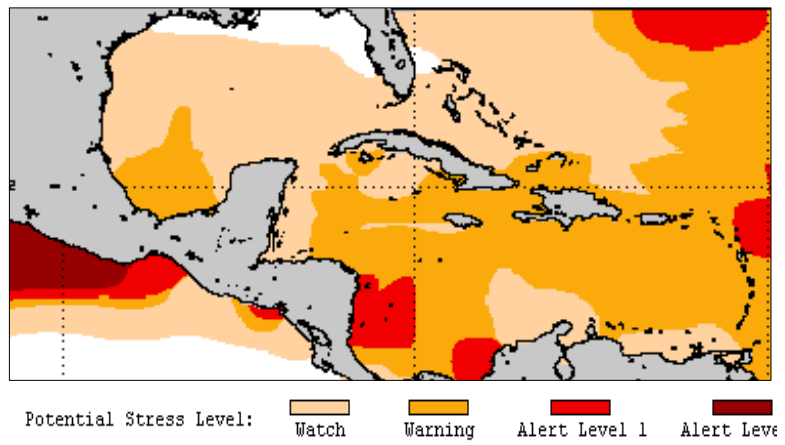


Figure 5. NOAA Coral Reef Watch Experimental Coral Bleaching Thermal Stress Outlook for August – November, 2014.
<http://coralreefwatch.noaa.gov/satellite/bleachingoutlook/index.php>

Program Partners:

